Department of Transportation
Federal Aviation Administration
Office of Airworthiness
Washington, D.C.

TSO-C34d

Date 4/19/84

Technical Standard Order

Subject: TSO-C34d, ILS GLIDE SLOPE RECEIVING EQUIPMENT OPERATING WITHIN 328.6 TO 335.4 MEGAHERTZ

(a) Applicability.

(1) Minimum Performance Standard. This Technical Standard Order (TSO) prescribes the minimum performance standard that ILS glide slope receiving equipment must meet in order to be identified with the applicable TSO marking. This TSO has been prepared in accordance with the procedural rules set forth in Subpart O of the Federal Aviation Regulations (FAR), Part 21. Models of ILS Glide Slope Receiving Equipment that are to be so identified and that are manufactured on or after the date of this TSO must meet the standard set forth in Radio Technical Commission for Aeronautics (RTCA) Document No. DO-132A, "Minimum Performance Standards for Airborne ILS Glide Slope Receiving Equipment," dated November 1978, as amended and supplemented by this TSO.

(2) Environmental Standard. The conditions and procedures prescribed in RTCA Document No. DO-160A, "Environmental Conditions and Test Procedures for Airborne Equipment," dated January 1980 are to be used in lieu of RTCA Document No. DO-160, "Environmental Conditions and Test Procedures for Airborne Electronic/Electrical Equipment and Instruments," dated February 28, 1975.

(3) Additions.

(i) In addition to paragraph 1.0, General Standards, of RTCA Document No. DO-132A, materials used must be self-extinguishing when tested in accordance with applicable requirements of § 25.1359(d) and Part 25, Appendix F of the Federal Aviation Regulations effective May 1, 1972.

(ii) If the equipment implementation includes a digital computer, the computer software package must be validated and verified in a manner acceptable to the Administrator. An acceptable means of compliance for validation and verification of the computer software package is contained in RTCA/DO-178, "Software Considerations in Airborne Systems and Equipment Certification," November 18, 1981.

DISTRIBUTION: ZVS-326;A-W(WS)-3;A-X(FS)-3;A-FFS-1,2,7,8(LTD);A-X(CD)-4;
A-FAC-0(MAX);AVN-1 (2 copies)

(4) Exceptions. This TSO does not include 100 KHZ Receiving Equipment.

(b) Marking.

(1) In addition to the marking specified in FAR § 21.607(d), the environmental categories in which it has been qualified to operate in accordance with RTCA Document DO-160A, and the class of centering accuracy (Class A, B, C, and D) for which it has been designed to operate, shall be legibly and permanently marked on the major equipment component.

(2) Each separate component of equipment that is manufactured under this TSO must be permanently and legibly marked with at least the name of the manufacturer and the TSO number.

(3) With regard to 21.607(d)(2), the part number is to include hardware and software identification or a separate part number may be utilized for hardware and software. Either approach must include a means for showing modification status.

(c) Data Requirements.

(1) In addition to the requirements of FAR § 21.605, the manufacturer must furnish the Manager, Aircraft Certification Office (ACO), Federal Aviation Administration (FAA), having purview of the manufacturer's facilities, one copy of each of the following technical data:

(i) Operating instructions.

(ii) Equipment limitations.

(iii) Installation procedures and limitations.

(iv) Schematic drawings as applicable to the installation procedures.

(v) Wiring diagrams as applicable to the installation procedures.

(vi) Specifications.

(vii) List of the major components (by part number) that make up the equipment system complying with the standards prescribed in this TSO.

(viii) Manufacturer's TSO qualification test report.

(ix) Nameplate drawing.

(2) In addition to those data requirements that are to be furnished directly to the FAA, each manufacturer must have available for review by the Manager, ACO having purview of the manufacturer's facilities the following technical data:

(i) A drawing list, enumerating all the drawings and processes that are necessary to define the article design.

(ii) The functional test specification to be used to test each production article to ensure compliance with this TSO.

(iii) Equipment calibration procedures.

(iv) Corrective maintenance procedures (within 12 months after TSO authorization).

(v) Schematic drawings.

(vi) Wiring diagrams.

(d) Data to be Furnished with Manufactured Units. One copy of the data and information specified in paragraphs (c)(1)(i) through (vii) of this TSO and instructions for periodic maintenance and calibration which are necessary for continued airworthiness must go to each person receiving for use one or more articles manufactured under this TSO.

(e) Previously Approved Equipment. ILS glide slope receiving equipment approved prior to the date of this TSO may continue to be manufactured under the provisions of the original approval.

(f) Availability of Reference Documents.

(1) Copies of RTCA Document Nos. DO-132A, DO-160A, and DO-178 may be purchased from the Radio Technical Commission for Aeronautics Secretariat, One McPherson Square, Suite 500, 1425 K Street, N.W., Washington, D.C. 20005.

(2) Federal Aviation Regulations Part 21, Subpart O and Advisory Circular 20-110, "Index of Aviation Technical Standard Orders," may be reviewed at the FAA Headquarters in the Office of Airworthiness, Aircraft Engineering Division (AWS-110), and at all regional ACO's.

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